

REMARKS

By this response, claims 1, 3 and 5-11 have been amended and new claims 14-20 have been added, leaving claims 1-20 pending. Applicants submit that the amendments to at least claims 3 and 5-11 do not narrow their scope. Reconsideration and reexamination are respectfully requested in light of the following remarks.

Restriction Requirement

Applicants affirm that an election was made to prosecute the subject matter of claims 1-11. Claims 12 and 13 stand withdrawn from consideration as being drawn to non-elected subject matter.

Allowable Subject Matter

Applicants gratefully acknowledge the indication in the Office Action that claims 6-8 and 10 contain allowable subject matter. For reasons discussed below, however, it is submitted that each of the elected claims is patentable.

Rejection Under 35 U.S.C. § 102

Claims 1-5 and 11 stand rejected under 35 U.S.C. § 102(e) over U.S. Patent No. 6,333,462 to Quaggia. The rejection is respectfully traversed.

Claim 1, as amended, recites "a solid insulator for use in a gas-insulated encapsulated high voltage installation, with an insulator body which is supporting at least one conductor that is provided for carrying high voltage, and that is to be arranged within an outer enclosure of the gas-insulated encapsulated high voltage

installation, wherein said insulator body comprises a fiber-reinforced polymer”

(emphasis added). Quaggia fails to disclose the combination of features recited in claim 1.

Quaggia discloses a dry termination for an electric cable. The Office Action refers to FIG. 2 of Quaggia, which depicts a termination including an insulating body 11. According to Quaggia, the insulating body 11 can be made of epoxy resin “optionally comprising fibres or other fillers to increase mechanical strength” (column 7, lines 61-65). The insulating body 11 is surrounded by an insulating sleeve 27, which is surrounded by a finned casing of insulating material 14. A conductive element 8 extends through the insulating body 11. As shown in FIG. 1, the termination is provided on an electric cable 3.

Quaggia’s termination is not “for use in a gas-insulated encapsulated high voltage installation” such that it “is to be arranged within an outer enclosure of the gas-insulated encapsulated high voltage installation.” In contrast, Quaggia discloses that the termination is specifically for outdoor use (column 1, lines 17-23). Quaggi does not disclose that the termination would be suitable for use in a gas-insulated encapsulated high voltage installation in which it is arranged within an outer enclosure of the installation.

For example, Quaggia does not disclose that the mechanical properties of the materials of the termination would be suitable for withstanding the influences that embodiments of the claimed solid insulator can be exposed to in a gas-insulated encapsulated high voltage installation. These influences are, in addition to high electrical fields, high mechanical loads, such as hydrostatic pressures and bending moments. See paragraph [0006] of the specification. Accordingly, Quaggia fails to

disclose or suggest the solid insulator recited in claim 1, which is thus patentable over Quaggia.

Claims 2-4 are also patentable over Quaggia for at least the same reasons as those discussed with respect to claim 1.

Regarding claim 5, the Office Action acknowledges that Quaggia does not disclose an insulator body in which "the orientation of the fibers in the insulator body is such that the insulator body has quasi-isotropic mechanical properties." As correctly stated in the Office Action, the term "quasi-isotropic properties" is described in the specification as meaning "in-plane properties identical in all directions." However, as explained at paragraph [0028], such quasi-isotropic properties can be achieved by using mainly three different fiber fabric orientations. In contrast, Quaggia fails to provide any details regarding any specific in-plane properties of the optional fibers, much less that they provide "quasi-isotropic properties."

The U.S. Patent Office Board of Patent Appeals and Interferences has stated that "[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ 1461, 1464 (Bd. Pat. App. & Inter. 1990). See also MPEP § 2112. Applicants submit that the Office Action has failed to provide the necessary basis in fact and/or technical reasoning to support the alleged inherency with respect to Quaggia. Thus, it is submitted that claim 5 is patentable.

Claim 11 recites the features that "a fiber backbone in the insulator body comprises a preform, which comprises a three-dimensional woven fiber structure." In contrast, Quaggi discloses making a winding with insulating fibers or yarns

disposed around the conductive element and soaked with a resin (column 13, lines 16-20). Applicants submit that Quaggia does not disclose the recited “three-dimensional woven fiber structure.” Accordingly, claim 11 is also patentable for this additional reason.

Therefore, withdrawal of the rejection is respectfully requested.

Rejection Under 35 U.S.C. § 103

Claim 9 stands rejected under 35 U.S.C. § 103(a) over Quaggia. The rejection is respectfully traversed.

Claim 9 depends from claim 1 and recites that “a fiber backbone of the insulator body comprises a preform with stacked layers of radial and hoop, biaxial or unidirectional fibers, where the layers are physically or chemically bonded.” As explained above, Quaggia discloses a winding of insulating fibers or yarns. Quaggia does not suggest modifying the termination to result in the fiber backbone recited in claim 9.

Therefore, withdrawal of the rejection is respectfully requested.

New Claims

Dependent claim 14 recites that the insulator body is of a disc shape. Support for claim 14 is provided, for example, at paragraphs [0010] and [0039] of the specification. Claims 15-20 depend from claim 14. Claims 14-20 are also patentable.

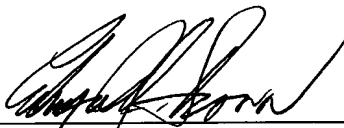
Conclusion

For the foregoing reasons, allowance of the application is respectfully requested. Should the Examiner have any questions concerning this response, Applicants' undersigned representative can be reached at the telephone number given below.

Respectfully submitted,

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